## REMARKS/ARGUMENTS

The Office Action mailed September 2, 2005 has been reviewed and carefully considered.

Claims 1, 3, 5, 6, 8, 9, 13-16, 18, 20, 22, 23, 25, 26, and 30 have been amended. Claims 1-30 are pending.

Claims 1-3, 5-20, and 22-30 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,453,472 to Leano et al. (hereinafter "Leano"). Claims 4 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Leano in view of U.S. Patent No. 6,588,016 to Chen (hereinafter "Chen").

It is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of independent Claim 1:

> In a modem device for bi-directionally communicating with a remote head-end disposed in a location remote from the modem device, a method for providing warning of impaired communication, comprising the steps of:
>
> ...
>
> initiating substantially periodic transmission of a message from said modem device to said remote head-end indicating a non-modem-device-based system adjustment is necessary, in response to said comparison.

Also, it is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of independent Claim 13:

> In a modem device for bi-directionally communicating with a remote head-end disposed in a location remote from the modem device, a method for providing warning of impaired communication, comprising the steps of:

> initiating substantially periodic transmission of a message including said retrieved communication parameter value from said modem device to said remote head-end indicating a non-modem-device-based system adjustment is necessary, in response to said comparison.

Moreover, it is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of independent Claim 16:

> In a modem device for bi-directionally communicating with a remote head-end disposed in a location remote from the modem device, a method for providing warning of impaired communication, comprising the steps of:
>
> ...
>
> initiating substantially periodic transmission of a message including said retrieved transmission power level value from said modem device to said remote head-end indicating a non-modem-device-based system adjustment is necessary, in response to said comparison.

Further, it is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of independent Claim 18:

> A modem device for providing warning of impaired communication in a system in which said modem device is bi-directionally communicating with a remote head-end disposed in a location remote from the modem device, said modem device comprising:
>
> ...
>
> means for initiating substantially periodic transmission of a message from the modem device to said remote head-end indicating a non-modem-device-based system adjustment is necessary, in response to said comparison.

Additionally, it is respectfully asserted that none of the cited references, either taken singly or in combination, teach or suggest the following limitations of independent Claim 30:

> A modem comprising:
> ...
> means for launching a message, said message indicating that a non-modem-based system adjustment is necessary, from the modem to a remote ~~site~~ head-end disposed in a location remote from the modem should said retrieved transmission power level value be at a value indicative of a potential communication link impairment.

As essentially recited in all of the preceding independent claims, a message is transmitted from a modem or modem device (hereinafter "modem") to a head-end that is disposed in a location remote from the device, the message indicating a non-modem-device-based system adjustment is necessary in response to the comparison. That is, a modem that is remote from the head-end and thus, cannot be part of the head-end, transmits a message to the remote head-end indicating that a system adjustment, which does not relate to the modem device that is transmitting the message, is necessary in response to the comparison.

In contrast, Leano discloses a method and apparatus wherein "[i]t is determined whether an actual power level of the cable modem requires adjustment to a desired power level and it is indicated to the cable modem that it should adjust the actual power level to an adjusted power level" (Leano, Abstract). The modem referred to by Leano is a modem remote from the head-end (see, e.g., Leano, col. 5, lines 33-47).

It is not surprising the Leano does not teach or suggest the above-recited limitations of Claims 1, 13, 16, 18, and 30, as the claimed invention is directed to a different problem than Leano and operates in a different manner than Leano.

For example, Leano discloses that "[i]n sum, a cable modem may disconnect when a large power level adjustment is required", and is thus

concerned with "facilitating power adjustments to a cable modem, while reducing the number and likelihood of cable modem disconnects" (Leano, col. 4, lines 64-65 and line 67 to col. 5, line 2). Accordingly, Leano discloses specific teachings as to how the power level in a modem should be adjusted (see, e.g., Leano, col. 5, lines 7-12, and lines 21-32). Leano summarizes as follows: "[i]n general terms, if a different desired power level is required for a particular cable modem, the cable modem's power level is gradually adjusted, rather than in one large step" (Leano, col. 5, lines 7-10).

In contrast, the present invention is directed to problems in but not limited to, e.g., an upstream path from the modem to a head-end. For example, the Applicants' specification discloses that "[c]able operator upstream path problems are a common cause of service interruption to subscribers due to improper upstream path grain or loss between particular cable modems in the cable network and the cable operator head-end. This problem may be caused, for example, by technician mis-adjustment of *cable plant* amplifiers and RF splitting or combining networks. The described cable modem system advantageously automatically senses and reports problems to a central cable operator network management station" (Applicants' specification, p. 2, line 36 to p. 3, line 1; see also, p. 7, lines 17-22).

Thus, the claimed invention and the invention of Leano operate differently in that the claimed invention may use a communication parameter or transmission power level value to determine whether a system adjustment, and NOT a modem adjustment, is necessary, while Leano is related to adjusting the power level of the modem.

Accordingly, Leano does not disclose the above-recited limitations of Claims 1, 13, 16, 18, and 30. Moreover, Chen does not cure the deficiencies of Leano and is silent with respect to the above-recited limitations.

A reference cited against a claim under 35 U.S.C. §102 must disclose each and every limitation of the rejected claim.

Accordingly, independent Claims 1, 13, 16, 18, and 30 are patentably distinct and non-obvious over Leano (and Chen) for at least the reasons set forth above.

Claims 2-12 depend from Claim 1 or a claim which itself is dependent from Claim 1 and, thus, includes all the elements of Claim 1. Claims 14-15 depend from Claim 13 and, thus, include all the limitations of Claim 13. Claim 17 depends from Claim 16 and, thus, includes all the limitations of Claim 16. Claims 19-29 depend from Claim 18 or a claim which itself is dependent from Claim 18 and, thus, includes all the elements of Claim 18. Accordingly, Claims 2-12, 14-15, 17, and 19-29 are patentably distinct and non-obvious over the cited reference for at least the reasons set forth above with respect to Claims 1, 13, 16, and 18, respectively.

Moreover, said dependent claims include patentable subject matter in and of themselves and are, thus, patentable distinct and non-obvious over the cited references in their own right.

For example, none of the cited references, either taken singly or in combination, disclose "wherein said retrieved communication parameter value represents an actual transmission upstream power level for communicating from said modem device to said remote site", as recited in Claims 15 and 20. As Claims 15 and 20 depend from Claims 13 and 16, respectively, the latter which both recite that the message transmitted from the modem to the remote head-end includes the retrieved communication parameter value, the message transmitted from the modem device to the remote head-end thus includes the ACTUAL transmission upstream power level.

That is, Claims 15 and 20 recite that the retrieved communication parameter value included in the message that is transmitted from the modem to the remote head-end includes the ACTUAL transmission upstream power level. In contrast, Leano instead discloses "[a] difference between the values of the adjusted power level and the cable modem's actual power level results in an adjustment to the cable modem's power level that is equal to this power level difference" (Leano, col. 9, lines 35-40). For example, the Examiner has admitted that the difference is communicated from the head end to the cable modem (Office Action, p. 5, paragraph directed at Claim 2). That is, while the actual value used in the comparison is included in the message sent from the modem to a remote head-end as claimed in Claims 13 and 16, Leano

discloses sending a difference value (which is not a value that was used in the comparison (let alone an actual transmitting power value)) from the head end to the modem. This very fact is even admitted by the Examiner, who states that "the difference value is a value calculated from the comparison of the cable modem input power level and an adjusted power level (Office Action, mailed Sept. 2, 2005, p. 15). Calculating a difference value from a comparison of the actual cable modem input power level and an adjusted power level is not the same as the actual transmission upstream power level. This is because, by definition, it represents a difference. As noted above, a reference cited against a claim under 35 U.S.C. §102 must disclose each and every limitation of the rejected claim. Accordingly, dependent Claims 15 and 20 are patentably distinct and non-obvious over the cited reference for at least the reasons set forth above.

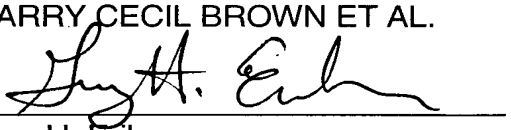
Accordingly, reconsideration of the rejections is respectfully requested.

In view of the foregoing, Applicants respectfully request that the rejection of the claims set forth in the Office Action of September 2, 2005 be withdrawn, that pending claims 1-30 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

Please charge the $790 fee for filing the RCE, and any other fees that may be associated with the filing of the enclosed documents to Deposit Account No. 07-0832.

Respectfully submitted,

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